

REMARKS

Claims 1-11 are all the claims pending in the application. The grounds of rejection for claims 1-9 remain the same as in the June 14, 2005 Office Action. New to this Office Action, the Examiner addresses Applicants' arguments provided in the October 14, 2005 Amendment in response to the June 14, 2005 Office Action, as well as cites the reasons for the rejection of claims 10 and 11 added in the prior Amendment. Solely to advance prosecution for particular exemplary embodiments of the present invention, Applicants have amended the claims to more clearly define the recited heat application devices used with the claimed methods of the invention.

In particular, Applicants have amended independent claim 1 to more clearly recite that the heat is applied "to only a predetermined adhesion area of said electrode lead..." Applicants respectfully submit that Sakamoto discloses that heat is applied to the entire electrode lead 20 partially covered with the resist layer at the temperature of 950 °C for 30 minutes (see Figure 3). As such, the heat application device of Sakamoto heats the entire electrode lead covered with the resist layer.

The present invention, however, only oxidizes a predetermined surface by use of the heat application device which applies the heat only to the predetermined area to be oxidized in the electrode lead (see Figures 2 and 4-8 of the present application). As such, Applicants respectfully submit that independent claim 1 distinguishes from Sakamoto.

Further, with respect to the claimed heat application device that comprises a pair of electrode members and a power source that applies a predetermined voltage between said pair of electrode members to heat said adhesion area, the Examiner states in the Response to Arguments that Kudo teaches a heat application device comprising a pair of electrode members (citing item 4; Figure 1; column 1, lines 25-40) and a power source (Figure 4) that applies a predetermined voltage (Figure 4) between said pair of electrode members to heat said adhesion area (citing column 7 lines 27-33); a portion of said electrode member (4) to contact a electrode lead (1) is made of a conductive material (citing column 1 lines 25-39). Therefore, the Examiner concludes that Kudo's heat application device is used to transport oxidized metal onto the needle electrode (citing column 1 lines 35-40).

Applicants respectfully submit that one of ordinary skill in the art would not use the Kudo device for oxidation purposes. The Examiner is directed to the use of heater 4 to heat needle electrode 1 which heats a metal ion source (see col. 1, lines 25-33). Kudo does not disclose heating an adhesion area as recited in amended claim 1, but rather use of the heater 4 to heat the metal ion to be used for circuit formation, mask-repairing, or surface analyzing (see col. 1, lines 15-19). As such, Applicants respectfully submit that Kudo does not disclose the features recited in claim 1, and that in conjunction with Harushige in view of Nakamura et al. and Sakamoto, the rejection was made using improper hindsight.

With respect to claim 4, the Examiner states that Kudo teaches in column 7, lines 27-55 that the voltage was changed during the process in order to produce the gallium ion source. Applicants respectfully submit that claim 4 recites adjusting a *degree of oxidation* by changing

the voltage, the electric current, the energizing period of the power source, or a combination thereof. The section cited by the Examiner relates to applying heat to a gallium source to emit ions. This experiment cited by the Examiner was conducted for purposes of measuring flashing intervals. As such, Applicants respectfully submit that one of ordinary skill in the art would not turn to Kudo for oxidation purposes.

With respect to claim 5, the Examiner states that in response to Applicants' argument that the laser as taught by Horiuchi fails to be used as a heater for the purpose of oxidizing, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Applicants note the case law provided by the Examiner, however, Horiuchi et al. is silent with respect to oxidation, and the laser is used for an entirely different purpose for heating quartz glass tube 67 so that the quartz glass tube 67 shrinks around the electrode because of the pressure difference between the inside and outside of the quartz glass tube 67 (see col. 15, lines 12-23). Because of the use of the laser in Horiuchi et al. for an entirely different purpose, one of ordinary skill in the art would not look to Horiuchi et al. for the purposes of its laser for oxidation of an electrode. As such, again, Applicants respectfully submit that the rejection was based on improper hindsight.

Next, the Examiner appears to inadvertently repeat the aforementioned argument stating that in response to Applicants' argument that the laser as taught by Horiuchi fails to be used as a

heater for the purpose of oxidizing, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Applicants believe that this argument was meant to cite the infrared device recited in claim 6 and the citation of Bundo et al.

Similar to the aforementioned argument Bundo et al. is silent with respect to oxidation, and its infrared device is used for the entirely different purpose of irradiating a glass ring (not shown) to form the sealing glass 16a (see col. 9, lines 19-30). Because of the use of the irradiation device in Bundo et al. for an entirely different purpose, one of ordinary skill in the art would not look to Bundo et al. for the purposes of use of an infrared light device for oxidation of an electrode.

With respect to claim 8, the Examiner states that Monneraye et al. teach a ring-shaped ceramic part that is part of the whole heating element (the ring and the oven into which is placed). The Examiner argues that it is common knowledge that ceramics are excellent heat conductors, and Monneraye et al. teach that the ceramic ring is placed in the oven (citing column 3 lines 5-8), therefore the ceramic ring would naturally transfer the heat to the electric lead.

Applicants again respectfully submit that this teaching and scenario provided by the grounds of rejection is far removed from the ring-shaped ceramic heater as claimed which is used for oxidation purposes of an electrode. The furnace of Monneraye et al. is not used, nor would suggest an oxidation process, but rather a sealing process. As such, one of ordinary skill

in the art would not look to Monneraye et al. for the purposes of use of a ring-shaped ceramic heater for oxidation of an electrode.

With respect to amended claim 9, the Examiner states, referring to Palmer, that Palmer et al. teach a heating method of a "pin" that is conductive (column 2 lines 16-60). Therefore, the Examiner argues that one may use this method on an electrode, which is also a type of "pin" that is conductive. As such, the Examiner argues that Palmer et al is analogous art. Applicants respectfully disagree with this broad scenario put forth by the Examiner.

A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem. See *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993). In this case, Palmer et al. is related to heating a mask support pin in a confined space of the corner of a television panel skirt, and would not have commended itself to an inventor's attention in considering the problems solved by the present invention. As such, one of ordinary skill in the art would not look to Palmer for the purposes of use of a high frequency induction heating device for oxidation of an electrode.

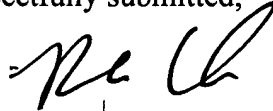
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment under 37 C.F.R. § 1.116
U.S. Application No. 10/642,292

Atty. Docket Q76987

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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